

**Commonwealth of Kentucky
Energy and Environment Cabinet
Department for Environmental Protection
Division for Air Quality
200 Fair Oaks Lane, 1st Floor
Frankfort, Kentucky 40601
(502) 564-3999**

**AIR QUALITY PERMIT
Issued under 401 KAR 52:040**

Permittee Name: Chesapeake Appalachia, LLC
Mailing Address: P.O. Box 6070
Charleston, WV 25362-0070

Source Name: Chesapeake Appalachia, LLC,
Mailing Address: Bear Fork Compressor Station
Robinson Creek
Kentucky

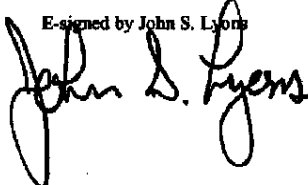
Source Location: Same as Above

Permit ID: S-08-119
Agency Interest #: 101461
Activity ID: APE20080001
Review Type: Minor Source, Construction / Operating
Source ID: 21-195-00232

Regional Office: Hazard Regional Office
233 Birch Street, Suite 2
Hazard, KY 41701
(606) 435-6022

County: Pike

Application
Complete Date: September 24, 2008
Issuance Date: October 22, 2008
Revision Date: N/A
Expiration Date: October 22, 2018

E-signed by John S. Lyons


**John S. Lyons, Director
Division for Air Quality**

SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:040, State-origin permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining other permits, licenses, or approvals that may be required by the Cabinet or other federal, state, or local agencies.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

EU-01 4-Cycle Lean Burn Natural Gas Fired Reciprocating Compressor

EP-01 Compressor Engine: Caterpillar G3508 LE
 Date of Construction: November 1, 2008
 Rated Performance: 670 hp
 Maximum Fuel Consumption: 5,200 scf/hr
 Primary Fuel: Natural gas
 Control Device: None

APPLICABLE REGULATION:

40 CFR 60 Subpart JJJJ, *Stationary Spark Ignition Internal Combustion Engines*: Subpart JJJJ is applicable pursuant to 40 CFR 60.4230 (a)(4)(ii) because the lean burn stationary spark ignition internal combustion engine will commence construction on or after January 1, 2008 and have a maximum engine power greater than or equal to 500 HP and less than 1,350 HP.

NON-APPLICABLE REGULATIONS:

40 CFR 63 Subpart HHH, *Natural Gas Transmission and Storage Facilities*: Pursuant to 40 CFR 63.1270, NESHAP Subpart HHH applies to natural gas transmission and storage facilities that are major sources of HAP. The facility is a minor source of HAPS; the requirements of this subpart do not apply to the station.

40 CFR 63 Subpart HH, *Oil and Natural Gas Production Facilities*: Pursuant to 40 CFR 63.760 (b)(2), NESHAP HH, applies to area sources that include a triethylene glycol (TEG) dehydration unit. Bear Fork Compressor Station does not have a TEG dehydration unit.

40 CFR 60 Subpart LLL, *NSPS for Onshore Natural Gas Processing: SO₂ Emissions*. Pursuant to 40 CFR 60.640, NSPS Subpart LLL applies to each sweetening unit and each sweetening unit followed by a sulfur recovery unit at onshore natural gas processing plants that commenced construction, reconstruction, or modification after July 20, 1984. The facility does not contain a natural gas sweetening unit and therefore the requirements do not apply.

40 CFR 60 Subpart KKK, *NSPS for Equipment Leaks of VOC from onshore Natural Gas Processing Plants*. Pursuant to 40 CFR 60.630, Subpart KKK applies to onshore natural gas processing plants that commenced construction, reconstruction, or modification after January 20, 1984. The facility does not meet the definition of a natural gas processing plant as defined in 40 CFR 60.631. The extraction of natural gas liquids from field gas or fractionation of natural gas liquids to products will not occur at this station and the requirements of NSPS Subpart KKK will not apply.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

1. Operating Limitations: N/A

2. Emission Limitations:

Pursuant to 40 CFR 60.4233 (e), emissions from EU-01 must not exceed the following emission limits below. The limits are for non-emergency spark ignition (SI) lean burn natural gas and liquefied petroleum gas (LPG) engines greater than or equal to 500 hp and less than 1,350 hp with a manufacture date of July 1, 2008:

- 2.0 g/bhp-hr of NO_x;
- 4.0 g/bhp-hr of CO; and
- 1.0 g/bhp-hr of VOC.

Compliance Demonstration Method:

For compliance with emission limits, refer to **3. Testing Requirements** and **5. Recordkeeping Requirements**.

3. Testing Requirements:

- a. Pursuant to 40 CFR 60.4243 (b)(1), if EU-01 is certified by the manufacturer pursuant to 40 CFR part 1048 and is installed and operated according to manufacturer's specifications, no testing is required to satisfy federal regulations.
- b. Pursuant to 40 CFR 60.4243 (b)(2)(ii), if EU-01 is not certified by the manufacturer, then the owners and operators must conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

4. Monitoring Requirements:

Refer to Section C, General Conditions.

5. Recordkeeping Requirements:

- a. Pursuant to 40 CFR 60.4243 (b)(2)(ii) and 60.4245 (a)(2), the permittee must keep a maintenance plan and records of conducted maintenance.
- b. Pursuant to 40 CFR 60.4245 (a)(3), if EU-01 is certified, the permittee must keep documentation from the manufacturer that it is certified to meet the emission standards and information as required in 40 CFR parts 90 and 1048.
- c. Pursuant to 40 CFR 60.4245 (a)(4), if EU-01 has not been certified or is a certified engine operating in a non-certified manner and subject to standard 40 CFR 60.4231, then the permittee must maintain documentation that the engine meets the emission standards.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

6. Reporting Requirements:

- a. Pursuant to 40 CFR 60.4245 (c), if EU-01 was not certified by the manufacturer, the permittee must submit an initial notification as required by 40 CFR 60.7 (a)(1) and include the items listed in 40 CFR 60.4245 (c)(1) thru (5).
- b. Pursuant to the 40 CFR 60.4245 (d), the permittee that is subject to performance testing of EU-01 must submit a copy of each performance test as conducted pursuant to 40 CFR 60.4244 within 60 days after the test has been completed.
- c. Refer to Section C, General Conditions.

SECTION C – GENERAL CONDITIONS:

1. Administrative Requirements

- a. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:040, Section 3(1)(b) and is grounds for enforcement action including but not limited to the termination, revocation and reissuance, or revision of this permit.
- b. This permit shall remain in effect for a fixed term of ten (10) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division. [401 KAR 52:040, Section 15]
- c. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit. [Section 1a-11 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23]
- d. Pursuant to materials incorporated by reference by 401 KAR 52:040, this permit may be revised, revoked, reopened, reissued, or terminated for cause. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance shall not stay any permit condition. [Section 1a-4, 5, of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23]
- e. This permit does not convey property rights or exclusive privileges. [Section 1a-8 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23]
- f. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance. [401 KAR 52:040 Section 11(3)]
- g. This permit shall be subject to suspension at any time the permittee fails to pay all fees within 90 days after notification as specified in 401 KAR 50:038, Air emissions fee. The permittee shall submit an annual emissions certification pursuant to 401 KAR 52:040, Section 20.

2. Recordkeeping Requirements

- a. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of at least five

SECTION C – GENERAL CONDITIONS (CONTINUED):

years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality. [401 KAR 52:040 Section 3(1)(f) and Section 1b-IV-2 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23]

- b. The permittee shall perform compliance certification and recordkeeping sufficient to assure compliance with the terms and conditions of the permit. Documents, including reports, shall be certified by a responsible official pursuant to 401 KAR 52:040, Section 21.

3. Reporting Requirements

- a. (1) In accordance with the provisions of 401 KAR 50:055, Section 1, the permittee shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
 - i. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
 - ii. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.
- (2) The permittee shall promptly report deviations from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Reporting Requirement condition a.(1) above), the probable cause of the deviation, and corrective or preventive measures taken; to the Regional Office listed on the front of this permit within 30 days. Other deviations from permit requirements shall be included in the semiannual report. [Section 1b-V-3 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23]
- b. The permittee shall furnish information requested by the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the permit. [Section 1a-6 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23]
- c. Summary reports of monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation. The summary reports are due January 30th and July 30th of each year. All deviations from permit requirements shall be clearly identified in the reports. All reports shall be certified by a responsible official pursuant to 401 KAR 52:040, Section 21.

SECTION C – GENERAL CONDITIONS (CONTINUED):

4. Inspections

In accordance with the requirements of 401 KAR 52:040, Section 3(1)(f) the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times. Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency:

- a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation.
- b. To access and copy any records required by the permit.
- c. Inspect, at reasonable times, any facilities, equipment (including monitoring and pollution control equipment), practices, or operations required by the permit.
- d. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.

5. Emergencies/Enforcement Provisions

- a. The permittee shall not use as defense in an enforcement action, the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance. [Section 1a-3 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23]
- b. An emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
 - (1) An emergency occurred and the permittee can identify the cause of the emergency;
 - (2) The permitted facility was at the time being properly operated;
 - (3) During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
 - (4) The permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division within two working days after the time when emission limitations were exceeded due to the emergency and included a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
- c. Emergency provisions listed in General Condition 5.b are in addition to any emergency or upset provision contained in an applicable requirement. [401 KAR 52:040, Section 22(1)]
- d. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof. [401 KAR 52:040, Section 22(2)]

SECTION C – GENERAL CONDITIONS (CONTINUED):

6. Compliance

- a. Periodic testing or instrumental or non-instrumental monitoring, which may consist of record keeping, shall be performed to the extent necessary to yield reliable data for purposes of demonstration of continuing compliance with the conditions of this permit. For the purpose of demonstration of continuing compliance, the following guidelines shall be followed:
 - (1) Pursuant to 401 KAR 50:055, General compliance requirements, Section 2(5), all air pollution control equipment and all pollution control measures proposed by the application in response to which this permit is issued shall be in place, properly maintained, and in operation at any time an affected facility for which the equipment and measures are designed is operated, except as provided by 401 KAR 50:055, Section 1.
 - (2) All the air pollution control systems shall be maintained regularly in accordance with good engineering practices and the recommendations of the respective manufacturers. A log shall be kept of all routine and nonroutine maintenance performed on each control device. Daily observations are required during daylight hours of all operations, control equipment and any visible emissions to determine whether conditions appear to be either normal or abnormal. If the operations, controls and/or emissions appear to be abnormal, the permittee must then comply with the requirements of Section C – General Conditions, 3.a.(2), of this permit.
 - (3) A log of the monthly raw material consumption and monthly production rates shall be kept available at the facility. Compliance with the emission limits may be demonstrated by computer program, spread sheets, calculations or performance tests as may be specified by the Division [401 KAR 50:055, Section 2].
- b. Pursuant to 401 KAR 52:040, Section 19, the permittee shall certify compliance with the terms and conditions contained in this permit by January 30th of each year, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an approved alternative) to the Regional Office listed on the front of this permit in accordance with the following requirements:
 - (1) Identification of the term or condition;
 - (2) Compliance status of each term or condition of the permit;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The method used for determining the compliance status for the source, currently and over the reporting period, and
 - (5) For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.
 - (6) The certification shall be postmarked by January 30th of each year. Annual compliance certifications shall be mailed to the following addresses:

Division for Air Quality	Division for Air Quality
Hazard Regional Office	Central Files
233 Birch Street, Suite 2	200 Fair Oaks Lane, 1 st Floor
Hazard, KY 41701	Frankfort, KY 40601-1403

SECTION C – GENERAL CONDITIONS (CONTINUED):

- c. Permit Shield - A permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of permit issuance. Compliance with the conditions of this permit shall be considered compliance with all:
 - (1) Applicable requirements that are included and specifically identified in this permit; or
 - (2) Non-applicable requirements expressly identified in this permit [401 KAR 52:040, Section 11].

7. Construction Requirements:

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the construction of the equipment described herein, Emission Unit EG01 (EP-05 and EP-06) in accordance with the terms and conditions of this permit.

- a. Pursuant to 401 KAR 52:040, Section 12(3), unless construction is commenced on or before 18 months after the date of issuance of this permit, or if construction is commenced and then stopped for any consecutive period of 18 months or more, or is not completed within a reasonable timeframe, then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Upon a written request, the Cabinet may extend these time periods if the source shows good cause.
- b. Pursuant to 401 KAR 52:040, Section 12(4)(a) and 401 KAR 59:005, General provisions, Section 3(1), within 30 days following construction commencement, within 15 days following start-up and attainment of maximum production rate, or within 15 days following the issuance date of this permit, whichever is later, the owner and/or operator of the affected facilities specified on this permit shall furnish to the Regional Office listed on the front of this permit, with a copy to the Division's Frankfort Central Office, the following:
 - (1) Date when construction commenced.
 - (2) Start-up date of each of the affected facilities listed on this permit.
 - (3) Date when maximum production rate was achieved.
- c. (1) Pursuant to 401 KAR 59:005, General provisions, Section 2(1), this permit shall allow time for the initial start-up, operation and compliance demonstration of the affected facilities listed herein. However, within 60 days after achieving the maximum production rate at which the affected facilities will be operated, but not later than 180 days after initial start-up of such facilities, the owner or operator shall demonstrate compliance to a duly authorized representative of the Division for Emission Unit EG01.

(2) Pursuant to 401 KAR 59:005, General provisions, Section 3(1)(b), unless notification and justification to the contrary are received by this Division, the date of achieving the maximum production rate at which the affected facilities will be operated shall be deemed to be 30 days after initial start-up.

SECTION C – GENERAL CONDITIONS (CONTINUED):

- (3) Pursuant to 401 KAR 50:045, Section 2, a source required to conduct a performance test shall submit a completed Compliance Test Protocol form, DEP form 6028, or a test protocol a source has developed for submission to other regulatory agencies, in a format approved by the cabinet, to the Division's Frankfort Central Office a minimum of sixty (60) days prior to the scheduled test date. Pursuant to 401 KAR 50:045, Section 7, the Division shall be notified of the actual test date at least Thirty (30) days prior to the test.
- (4) Pursuant to 401 KAR 50:045 Section 5 in order to demonstrate that a source is capable of complying with a standard at all times, a performance test shall be conducted under normal conditions that are representative of the source's operations and create the highest rate of emissions. If [When] the maximum production rate represents a source's highest emissions rate and a performance test is conducted at less than the maximum production rate, a source shall be limited to a production rate of no greater than 110 percent of the average production rate during the performance tests. If and when the facility is capable of operation at the rate specified in the application, the source may retest to demonstrate compliance at the new production rate. The Division for Air Quality may waive this requirement on a case-by-case basis if the source demonstrates to the Division's satisfaction that the source is in compliance with all applicable requirements.
- d. Operation of the affected facilities authorized by this permit shall not commence until compliance with applicable standards specified herein has been demonstrated in accordance with the requirements of 401 KAR 52:040, Section 12(4)(b). Until compliance is demonstrated, the source may only operate for the purpose of demonstrating compliance.